

In the Claims:

Following is a complete listing of the claims pending in the application, as amended:

1-21. (Canceled)

22. (Original) A method for finishing a surface of a protective package on a microelectronic device, comprising:

etching at least a portion of the surface of the package to remove a layer of material from the package; and
cleaning residual materials and/or chemicals from the package after terminating the etching of the package surface.

23. (Original) The method of claim 22 wherein etching the package includes chemically etching at least a portion of the surface of the package with hydrofluoric acid, and wherein cleaning the package includes rinsing at least a portion of the package with de-ionized water.

24. (Original) The method of claim 22, wherein the package surface to be finished is positioned adjacent to an interposing substrate assembly, and wherein the method further comprises positioning a masking member at least adjacent to a portion of the interposing substrate assembly such that the portion of the package surface to be etched is not covered by the masking member.

25. (Original) The method of claim 22, further comprising:
controlling the depth of the etching by determining a depth at which the chemical etching will have removed sufficient blemishes from the package surface to attain a preselected surface finish and terminating the etching at the depth where the preselected surface finish has been attained.

26. (Original) A method for finishing a surface of a protective package on a microelectronic device, comprising:

ablating the surface of the package to remove a layer of material from the package; and

cleaning residual materials from the package after terminating the ablation of the package surface.

27. (Original) The method of claim 26, further comprising:

controlling the depth of ablation by determining a depth at which the ablation will have removed sufficient blemishes in the surface to attain a preselected surface finish and terminating the ablation at the depth where the preselected surface finish has been attained.

28. (Original) The method of claim 26 wherein ablating the surface of the package comprises consuming material from the package using a laser.

29. (Original) A method for finishing a surface of a protective package on a microelectronic device, comprising:

pressing a surface of a stamp or press having a preselected finish against at least a portion of the package surface to emboss the package surface; and

controlling the amount of embossing by determining the time required to produce a preselected uniform surface texture and terminating the embossing after the time required to produce the preselected uniform surface texture has elapsed.

30. (Original) The method of claim 29, further comprising heating the surface of the stamp or press.

31-48. (Canceled)

49. (New) A method for simultaneously finishing a surface of a protective package on each of a plurality of microelectronic devices carried on a common substrate, comprising:

etching at least a portion of the surface of each package to remove a layer of material from the package;
cleaning residual materials and/or chemicals from the package after terminating the etching of the package surface; and
after terminating the etching, cutting the common substrate to separate the microelectronic devices from one another.

50. (New) The method of claim 49 wherein etching the surface of each package includes chemically etching at least a portion of the surface of the package with hydrofluoric acid, and wherein cleaning the package includes rinsing at least a portion of the package with de-ionized water.

51. (New) The method of claim 49, wherein the common substrate comprises an interposing substrate assembly, and wherein the method further comprises positioning a masking member at least adjacent to a portion of the interposing substrate assembly such that the portion of the package surface to be etched is not covered by the masking member.

52. (New) The method of claim 49, further comprising:
controlling the depth of the etching by determining a depth at which the chemical etching will have removed sufficient blemishes from the package surface to attain a preselected surface finish and terminating the etching at the depth where the preselected surface finish has been attained.

53. (New) A method for finishing a surface of a blemished one of a plurality of protective packages, with one of the protective packages being on each of a plurality of microelectronic devices carried on a common substrate, comprising:

ablating the surface of the blemished package to remove a layer of material from the package;

cleaning residual materials from the package after terminating the ablation of the package surface; and

after terminating the ablation, cutting the common substrate to separate the microelectronic devices from one another.

54. (New) The method of claim 53, further comprising:

controlling the depth of ablation by determining a depth at which the ablation will have removed sufficient blemishes in the surface of the blemished package to attain a preselected surface finish and terminating the ablation at the depth where the preselected surface finish has been attained.

55. (New) The method of claim 53 wherein ablating the surface of the package comprises consuming material from the package using a laser.

56. (New) A method for packaging a microelectronic device, comprising:

molding package compound at least partially around a microelectronic die in a mold to at least partially encase the microelectronic die, leaving a surface blemish on a marking surface of the mold compound;

removing the package from the mold;

prior to marking the marking surface, etching at least a portion of the marking surface to remove a layer of material from the package;

terminating the etching when the surface blemish has been at least partially removed from the package; and

marking the etched marking surface after terminating the etching.

57. (New) The method of claim 56, wherein the package is positioned adjacent to an interposing substrate assembly, and wherein the method further comprises positioning a masking member at least adjacent to a portion of the interposing substrate assembly such that the portion of the package surface to be etched is not covered by the masking member.

58. (New) The method of claim 56, wherein etching the surface of each package includes chemically etching at least a portion of the surface of the package with hydrofluoric acid, and wherein cleaning the package includes rinsing at least a portion of the package with de-ionized water.

59. (New) The method of claim 56, further comprising:

controlling the depth of the etching by determining a depth at which the chemical etching will have removed sufficient blemishes from the package surface to attain a preselected surface finish and terminating the etching at the depth where the preselected surface finish has been attained.

60. (New) A method for marking a surface of a protective resin package on a microelectronic device, comprising:

providing a plurality of microelectronic devices on a common substrate, each of the microelectronic devices including a protective resin package;

simultaneously etching at least a portion of the surface of each package to remove a layer of material from each package formed on the common substrate;

terminating the etching when a surface blemish on at least one of the packages has been at least partially removed from the package; and

applying a mark to each of the packages after terminating the etching.

61. (New) The method of claim 60, wherein at least one of the microelectronic devices has been identified as having a resin package with a blemish on a primary marking surface of the package, and wherein the surface to be marked is the primary marking surface.

62. (New) A method for packaging a microelectronic die carried on a substrate, comprising:

- molding package compound at least partially around a microelectronic die in a mold to at least partially encase the microelectronic die, leaving a portion of the substrate exposed and leaving a surface blemish on a marking surface of the package compound;

- removing the resulting package from the mold;

- prior to marking the marking surface, positioning a masking member at least adjacent to a portion of the substrate such that the marking surface is not covered by the masking member;

- prior to marking the marking surface, etching at least a portion of the marking surface to remove a layer of material from each package formed on the common substrate;

- terminating the etching when the surface blemish has been at least partially removed from the package; and

- marking the etched marking surface after terminating the etching.